CITY COUNCIL AGENDA STATEMENT

CITY OF CHULA VISTA

APRIL 1, 2008, Item_____

ITEM TITLE: RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CHULA VISTA ACCEPTING THE CHULA VISTA CLIMATE CHANGE WORKING GROUP'S FINAL RECOMMENDATIONS REPORT, ADOPTING RECOMMENDATIONS #1 AND #2 AS AMENDED BY STAFF AND DIRECTING STAFF TO RETURN TO COUNCIL WITHIN 90 DAYS WITH MORE DETAILED RECOMMENDATIONS REGARDING ITEMS #3-5 AND #7.

SUBMITTED BY: DIR. OF CONSERVATION & ENVIRONMENTAL SERVICES

ENVIRONMENTAL RESOURCE MANAGER

REVIEWED BY: CITY MANAGER

ASSISTANT CITY MANAGER

4/5THS VOTE: YES [ ] **NO** [X]

SUMMARY

In May 2007 staff reported to City Council that Chula Vista's citywide greenhouse gas emissions had increased by 35% (mainly due to residential growth) from 1990 to 2005, while emissions from municipal operations decreased by 18%. As a result, the City Council directed staff to convene a Climate Change Working Group to develop recommendations to reduce the community's greenhouse gas emissions or "carbon footprint" in order to meet the City's 2010 greenhouse gas emissions reduction targets. Over the last ten months, the Working Group - comprised of residential, business and community-group representatives - reviewed over 90 carbon-reducing measures that were previously implemented by other communities to determine their applicability and potential effectiveness in Chula Vista. The Climate Change Working Group has completed its review of these measures and has selected seven measures which it recommends for implementation to further lower the community's carbon emissions by the City's 2010 Kyoto commitment.

ENVIRONMENTAL REVIEW

The Environmental Review Coordinator has reviewed the proposed project for compliance with the California Environmental Quality Act (CEQA) and has determined that the project qualifies for a Class 8 categorical exemption pursuant to Section 15308 [Actions by Regulatory Agencies for Protection of the Environment] of the State CEQA Guidelines. Thus, no further environmental review is necessary.

RECOMMENDATION

Staff recommends that City Council (1) accept the Climate Change Working Group's final recommendations report, (2) adopt recommendations #1 and #2 as amended by staff and (3) direct staff to further evaluate recommendations #3-5 and #7 for future Council consideration. Recommendation #6 does not require further action because mixed-use, transit-oriented zoning has already been incorporated into City planning documents.

BOARDS/COMMISSION RECOMMENDATION

In February 2008 City officials requested that the CCWG's recommendation be presented to City Council immediately. As a result, the CCWG has not had an opportunity to present its report to the Resource Conservation Commission yet, but is currently scheduled for the Commission's April 21st meeting. City staff did present the 2005 Greenhouse Gas Emissions Inventory to the Commission as an Information Item at their April 16, 2007 meeting.

DISCUSSION

Since the early 1990s, Chula Vista has been engaged in multiple climate change forums including the United Nations Framework Convention on Climate Change and the Kyoto Protocol Conference. As a result of this initial involvement, the City was the first local government with fewer than 1 million residents to become a founding member of ICLEI – the International Council for Local Environmental Initiatives – and its Cities for Climate Protection campaign. In 2000 Council voted to adopt the City's Carbon Dioxide Reduction Plan establishing the goal of reducing the City's greenhouse gas (GHG) or "carbon" emissions 20% below 1990 levels by 2010. The City reinforced this reduction commitment through support of the California Global Warming Solutions Act (AB32) and the U.S. Conference of Mayor's Climate Protection Agreement, which once again pledged that Chula Vista would reduce its carbon emissions to pre-1990 levels.

The 2005 Greenhouse Gas (GHG) Emissions Inventory was the first formal evaluation of the City's progress in reaching its emissions goals. The 2005 inventory indicated that Chula Vista's annual citywide GHG levels had increased by 35% since 1990 due primarily to residential growth. During the same period, the City did make significant progress in reducing annual per capita emissions by 17% and avoiding nearly 200,000 tons of GHG emissions annually. In addition, GHG emissions from municipal sources decreased by 18% mainly due to energy-efficient traffic signal retrofits. As a result of its 2005 Greenhouse Gas Emissions Inventory Report, the City Council directed staff to convene a Climate Change Working Group (CCWG) to develop recommendations to reduce the community's greenhouse gas emissions or "carbon footprint" in order to meet the City's 2010 greenhouse gas emissions reduction targets.

The Group was convened under the direction of the Council's ICLEI representatives, Councilmember Castaneda and Councilmember McCann, who serve as the City's Climate Change Subcommittee. The Subcommittee and their staff took an active role in establishing the private sector categories on the Working Group, submitting participant names and reviewing all potential representatives. The Planning Department, General Services, Public Works and Community Development were also invited to participate. The final ten-member group included seven Chula Vista residents and three participants who lived elsewhere but were involved in the Chula Vista community. The Working Group was also supported by three ex-officio members with strong interests in Chula Vista's climate reduction actions (see Appendix A for full participant list).

To help direct the Group in their task of identifying effective emissions reduction strategies, City staff provided them with the following five primary principles in developing their recommendations: 1) the measure had been previously implemented successfully by an ICLEI local government or California Climate Action Registry business, 2) the measure would be financially feasible (i.e. require little or no additional General Fund support, 3) the measure could be quickly implemented to have immediate impact on the City's efforts to reduce emissions by 2010, 4) the measures' impacts could be quantified using the City's emissions inventory protocol and 5) the measure would not cause a significant adverse community impact. The CCWG's meetings were initially moderated by a trained and independent City facilitator (Dawn Beintema), while Conservation and Environmental Services Department staff provided administrative support.

The Climate Change Working Group's final recommendations are outlined in their attached final report and analyzed by City staff below. The CCWG's final recommendations were written collaboratively by Working Group members and incorporate responses to questions and comments raised by the public and City staff during their meetings. The recommendations represent a powerful strategy that, if followed, could slow the rate at which the City's GHG emissions increase in the future and may ultimately contribute to lowering emissions to below 1990 levels.

The CCWG's recommendations vary in their level of required City commitment (i.e. staff time, funding, new programs/policies) and their impact on GHG emissions (i.e. reduction magnitude and timeframe). To assist the City Council in evaluating the recommendations, City staff has analyzed the recommendations' potential effectiveness to reduce emissions and the required next steps for implementation. Unfortunately, the CCWG and City staff did not have the resources to quantify exact emissions reductions created by each recommendation, rather the Group relied on the information provided by other cities that have successfully implemented these measures. Staff is able to provide a relative comparison between recommendations on their potential to reduce citywide emissions. More detailed emissions analyses would require the use of an outside consultant with more advanced modeling capabilities. Each CCWG recommendation is reviewed below by City staff for its fiscal impact, relative emissions impact and the necessary "next steps" to implement the measure. In addition, City staff included their own recommendations on how

certain measures could be amended to improve their effectiveness. It should be noted that there are a number of current and future statewide regulations that will complement the CCWG's recommendations below and assist Chula Vista in reducing its "carbon footprint."

1) *Require that 100% of the replacement vehicles purchased for the municipal fleet be high efficiency (hybrid) or alternative fuel vehicles (AFVs).*

Fiscal Impact: New higher efficiency/alternative fuel vehicles could be purchased using the City's Equipment Replacement Funds when vehicles are replaced. Although the initial costs for each replacement vehicle could be higher than a conventional replacement, fuel savings may offset this initial price difference (ranging between $5,000 for small sedans to $70,000 for heavy-duty trucks) over the vehicle's lifetime. For example, some hybrid models recover their price premium in fuel savings within five years.[1] Some alternative fuels may also be less expensive than conventional fuels on a price per gallon and price per gasoline-gallon equivalent.[2] It is estimated that the City's total annual vehicle replacement costs would increase by at least $140,000 if hybrids and/or alternative fuel vehicle replacements were required for light duty vehicles such as cars and small trucks. Large equipment replacement with hybrids or AFVs would further increase the annual impact on the Equipment Replacement Fund. As a result, there would need to be incremental increases in vehicle replacement fees paid by each City department which could indirectly affect future municipal budgets. Transitioning to some alternative fuels may also require municipal infrastructure improvements. For example, the City has been ready to integrate biodiesel into its large equipment and truck fleet, but is waiting for the capital funds (approximately $440,000) to complete the installation of diesel and gasoline storage tanks at the Public Works Corp Yard before implementing the program. Grant funds may be available to offset a portion of the necessary infrastructure improvement costs for some alternative fuels in the future.

Emissions Impact: City fleet vehicle emissions account for 54% of the emissions from municipal operations but make up less than 1% of the citywide emissions. A "green" City fleet has a greater impact on the community as a demonstration of leadership and as a catalyst for alternative transportation infrastructure than on reducing community-wide emissions. To its credit, the City has added compressed natural gas buses and cars, electric vehicles and forklifts and a fuel cell vehicle to its fleet over the years. The City began purchasing hybrid replacement vehicles two years ago before the vehicle replacement fund was altered to accommodate budget challenges. This measure is easily quantifiable and will reduce municipal transportation emissions incrementally over the estimated 10-15 years that it will take to replace the fleet and/or convert to alternative fuels. City leadership in AFV/hybrid and alternative fuel purchasing has the potential to increase local markets and infrastructure that could advance community-wide adoption and increase emissions reductions. The measure could also provide a catalyst for local private investments in AFV and infrastructure that would further expand the recommendation's emissions reductions.

Implementation Steps: This measure would require an amendment to the City's purchasing/bid requirements stipulating that all new vehicle purchases should be either high

[1] Consumer Reports, August 2006
[2] Clean Cities Alternative Fuel Price Report, October 2007

efficiency (hybrid) or alternative fuel vehicles. This measure has the added benefit of improving local air quality by reducing the local generation of particulates and other air emissions that contribute to asthma and lung disease.

Staff Suggestions: Staff recommends that this measure be implemented; however, the measure may not be immediately applicable to public safety and large equipment classes. Staff recommends that it be provided with the flexibility to test and phase in alternative fuels, hybrid and/or electric vehicles into public safety vehicles and large equipment classes to ensure that they are operationally-practical and technically-feasible. Depending on the rate of vehicle replacement, there may need to be budget adjustments to cover increased replacement fees paid by each City department.

2) *Encourage City-contracted fleet operators to adopt the use of high efficiency (hybrid) or alternative fuel vehicles (AFVs) by stipulating that 100% of replacement vehicle purchases should be alternative fuel or hybrid vehicles.*

Fiscal Impact: The measure's implementation costs would be fully borne by contractors and absorbed into their municipal contracts. The hybrid and/or alternative fuel vehicles' increased initial costs may be offset by their future fuel cost savings resulting in long-term savings for the contractor. There is a possibility that increased contractor costs from measure implementation could be passed onto City ratepayers through higher fees.

Emissions Impact: Because the City's current emissions inventory protocol does not directly quantify emissions from City-contracted fleet vehicles (ex. street sweepers and solid waste trucks), estimating the measure's impact is problematic. However, the measure would help increase local demand for alternative fueling and electric charging stations which may help catalyze private investments in local AFV infrastructure and expand the measure's emissions impact (similar to measure #1). Additionally, contractors' alternative fuel choices could be coordinated with City practices to complement one another and potentially reduce infrastructure costs. This measure also has the added benefit of improving local air quality by reducing the local generation of particulates and other air emissions that contribute to asthma and lung disease.

Implementation Steps: This measure would require an amendment to the City's contracting/bid requirements encouraging all contracted fleet operators to incorporate high efficiency (hybrid) and AFV as their fleet vehicles are replaced. This requirement would not pertain to vehicle classes in which there is not an operationally-practical, technically-feasible hybrid or alternative fuel option.

Staff Suggestions: City staff recommends amending this measure to require City-contracted fleet operators to fully incorporate hybrid and AFV as their fleet vehicles are replaced when new contracts are negotiated or existing contracts are extended. The requirement would only pertain to vehicle classes in which there is an operationally-practical, technically-feasible hybrid or alternative fuel option.

3) *Require Chula Vista-licensed businesses to participate in an energy assessment of their physical premises every 3 years or upon change of ownership.*

Fiscal Impact: As part of its 2009-2011 SDG&E Partnership proposal, Chula Vista has

requested funding for City staff to provide businesses with free facility energy assessments. These assessments allow business owners and managers to learn about opportunities (technological and behavioral) to reduce energy consumption and costs. If the City is awarded the Partnership in July 2008, there would be no costs associated with this measure for the City or businesses through December 2011 or as long as external SDG&E funding continues. If there is no external funding, the measure's implementation is estimated to cost the City $250,000 annually.

Emissions Impact: While the measure does not require businesses to adopt energy-efficiency improvements, it does help them to understand and apply for SDG&E rebate and incentive programs that would lead to energy conservation. Over the last two years, City staff has visited over 2,000 businesses and identified over 800,000 kWh in potential energy savings (equivalent to 640,000 lbs CO2). Requiring an energy assessment as part of the business license renewal process will greatly expand the potential for immediate emissions reductions.

Implementation Steps: Implementation of this measure would necessitate an addition to Chula Vista's municipal code requiring businesses to have a free energy assessment of their premises every 3 years or when ownership changes in order to be issued a business license. Staff would need to develop the code's specific-language and return to City Council within 90 days for their review and consideration. This requirement would not pertain to mobile-type businesses such as plumbers and electricians.

Staff Suggestions: Staff would provide up to a 3-year exemption to businesses occupying newly-constructed and remodeled facilities that meet Recommendation 4's green building standards. Staff would also provide an annual exemption to businesses that participate in the California Climate Action Registry's GHG emissions reporting process.

4) *Adopt community-wide green building standards that are comprehensive in coverage and mandatory. New and substantially remodeled structures will be required to be built to LEED Silver (or to an equivalent 3rd party certification green building program standard), with the effect of having an energy efficiency impact of at least 20% over Title-24.*

Fiscal Impact: The measure's cost would be fully borne by residential, commercial and industrial developers. Building construction costs can increase between 1-11% when meeting green building criteria and vary based on location, project type and green building standard (ex. Leadership in Energy & Environmental Design (LEED) "Certified" vs. "Platinum") according to numerous published studies.[3][4] However, the additional construction costs associated with green buildings in California average 2% and frequently result in operational cost savings of more than 10 times the initial investment over the building's lifetime according to a recent study commissioned by the California Integrated Waste Management Board.[5]

Emissions Impact: Emissions from building energy use represent 52% of the community's "carbon footprint" and have increased dramatically since 1990. In order to produce a citywide net reduction in building-related emission levels, additional new buildings would

[3] LEED Cost Study, US General Services Administration, October 2004
[4] Analyzing the Cost of Obtaining LEED Certification, American Chemistry Council, April 2003
[5] Cost & Financial Benefits of Green Buildings – California's Sustainable Building Task Force, Oct. 2003

need to be zero energy structures and/or their energy consumption would need to be more than offset by increased energy efficiency in remodeled existing buildings. The CCWG's recommendation, applying to new construction and major remodels, would minimize future emissions increases from new "Greenfield" development and lower emissions from redevelopment projects. Because the City has direct authority over community-wide building standards, this CCWG recommendation represents the greatest potential to immediately avoid increased citywide greenhouse gas emissions and could significantly reduce emission levels over time.

Implementation Steps: Implementation of this measure would require an addition to Chula Vista's municipal code requiring all new buildings to meet specified green building standards. Staff would need to develop the code's specific-language and return to City Council within 90 days to present a detailed plan for their review and consideration.

Staff Suggestions: To minimize any potential or perceived burden on consumers and developers with higher construction costs, staff recommends that a tiered and phased approach to the program be applied. Another option would be to require new construction to exceed Title-24 by 20% and meet a green building standard which has no third party verification costs. This may help lower developer costs associated with hiring green building consultants and certifying projects through a 3rd party green building program (such as the US Green Building Council – LEED). Additionally**,** staff would like the opportunity to continue to incorporate incentives which encourage builders to exceed any green building standard adopted by City Council.

5) *Facilitate widespread installation of solar photovoltaic (PV) systems on commercial, residential and municipal facilities by developing and implementing a solar energy conversion program. Proactively enforce existing codes requiring pre-plumbing for solar hot water.*

Fiscal Impact: The exact fiscal impact of developing and implementing a solar energy conversion program is unknown until the program's detailed work plan can be developed. In addition to federal and state incentives, there are numerous external financing mechanisms that could reduce costs to consumers and limit the City's cost for implementing a solar conversion program (such as the creation of voluntary assessment districts).

Emissions Impact: Because solar energy programs replace grid-source energy with renewable energy, they can lead to quantifiable reductions in greenhouse gas emissions. Building energy use accounts for 52% of citywide carbon emissions. If there is a high level of program participation, this measure could lead to very significant decreases in Chula Vista's community GHG emission levels.

Implementation Steps: In order to develop and implement a comprehensive solar energy conversion program, staff would need to return to City Council within 90 days with a work plan detailing staffing needs, funding mechanisms and ordinance revisions (if necessary) for their review and consideration. The measure's second component – actively enforcing existing codes which require pre-plumbing for solar hot water – can be immediately implemented with minimal additional staff training and expenses.

Staff Suggestions: Staff strongly believes that a solar energy conversion program will provide ratepayers with the best return on investment if it includes an energy conservation

component.

6) *Facilitate "Smart Growth" around the H St., E St. and Palomar St. Trolley Stations.*
Fiscal Impact: Because mixed-use and high-density redevelopment around transit centers is already required under the Council-approved General Plan and Urban Core Specific Plan, the measure does not increase City funding commitments.
Emissions Impact: Transportation emissions represent 48% of Chula Vista's "carbon footprint." The City inventory protocol quantifies community transportation emissions by using traffic congestion values, specifically Vehicle Miles Traveled (VMT). Smart Growth around transit facilities will help reduce dependency on personal automobiles by creating pedestrian and transit-friendly communities and lowering VMT values, thus creating emissions reductions. Although full reductions would not be apparent until redevelopment is completed (approximately 15-20 years), transportation behavioral changes could begin to could occur as redevelopment is initiated resulting in incremental emissions reductions.
Implementation Steps: The H St. and E St. trolley station areas have already been designated for mixed-use, high-density redevelopment under the approved Urban Core Specific Plan requiring no further Council action. Likewise, the General Plan envisions the Palomar station as a "transit-focus area" surrounded by mixed-use, high-density residential development. The area's specific land uses, densities and development standards will be further refined through the Southwest Specific Plan process. Therefore, no Council action is required at this time. However, the Group wanted to highlight that these development project types are critical for reducing VMT and decreasing community emissions from transportation sources.
Staff Suggestions: Staff strongly reiterates the Working Group's recommendation for the City to continue to encourage transit-focused redevelopment around its trolley stations. Because it is under direct municipal authority, community and land use planning is the City's strongest tool to reduce transportation emissions which comprise 48% of Chula Vista total GHG emissions. Land use planning along with renewable energy and energy-efficiency codes/regulations are the top areas identified by State agencies as the keys for local government leadership.

7) *Coordinate with Otay Water District, San Diego County Water Authority and the Sweetwater Authority to convert turf lawns to xeriscape. Converting lawns to water-wise landscaping has been shown to reduce outdoor residential water use by 40%.*
Fiscal Impact: The exact fiscal impact of developing and implementing a turf lawn conversion program is unknown until the program's detailed work plan can be developed. Providing the public education and promotion for a water agency-based incentive program could be of little or no cost to the City. If the program incorporates a City-funded incentive to supplement existing water district incentives, the measure's implementation costs would be increased.
Emissions Impact: The California Energy Commission has stated that 19% of all energy in the state is consumed by the transfer or treatment of water and are developing a conversion factor for kilowatts (kW) saved per gallon. The San Diego Water Authority has also

identified outdoor irrigation as a primary target for water conservation. The City inventory protocol does not directly quantify emissions from water use (i.e. energy used to import, treat and dispose of water), rather it only includes energy associated with locally pumping and treating water within municipal boundaries. Therefore, water conservation may only lead to minimal locally quantifiable emissions reductions in the short term. Once the Energy Commission completes its kW per gallon conversion, water conservation's contribution to GHG reduction will be quantifiable and may be significant.

Implementation Steps: In order to develop and implement a comprehensive turf conversion program, staff would need to return to City Council within 90 days with a work plan detailing staffing and funding needs for their review and consideration.

Staff Suggestions: Staff suggests that the measure's effectiveness could be increased if included as part of a broader community water conservation strategy which could also include mandatory toilet retrofits, commercial garbage disposal prohibitions and additional new construction and landscape requirements.

DECISION MAKER CONFLICT

Staff has determined that the recommendations requiring Council action are not site specific and consequently the 500 foot rule found in California Code of Regulations section 18704.2(a)(1) is not applicable to this decision.

FISCAL IMPACT

The fiscal impact of implementing each recommendation varies. Recommendations #2 (City-contracted Fleets), 3 (Business License Energy Assessments), 4 (Green Buildings) and 6 (Smart Growth) would not directly affect the City's General Fund through new appropriations, while recommendation #1 (City-fleet AFV Requirement) would cause higher replacement costs for City fleet vehicles. Because Equipment Replacement Funds would be spent more quickly, it is expected that there would need to be incremental increases in vehicle replacement fees paid by each City department which could indirectly affect future municipal budgets. The potential fiscal impact of recommendations #5 and 7 will not be known until more detailed work plans are developed and presented to City Council for review and approval.

ATTACHMENTS

Climate Change Working Group Final Recommendations Report – April 2008
2005 Greenhouse Gas Emissions Inventory

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